



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,757	03/30/2001	Satoshi Hanada	7372/70910	3864

22242 7590 03/15/2004

FITCH EVEN TABIN AND FLANNERY  
120 SOUTH LA SALLE STREET  
SUITE 1600  
CHICAGO, IL 60603-3406

EXAMINER

SIMONE, CATHERINE A

ART UNIT PAPER NUMBER

1772

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/820,757

Applicant(s)

HANADA ET AL.

Examiner

Catherine Simone

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### *Withdrawn Rejections*

2. The 35 U.S.C. 103 rejection of claims 1-12 over Tsubone (5,882,782) of record in the Office Action mailed 9/2/03, Paragraph #2, Pages 2-3 has been withdrawn due to the Applicant's amendment filed 7/17/03.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-6 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. (JP 10-130412; refer to computer translation copy).

Regarding **claims 1-4**, Morita et al. discloses a thermoplastic resin sheet having a thermoplastic resin expanded layer (see claim 1). However, Morita et al. fails to disclose an expansion ratio in a range of 3 to 40 times and a cell wall density ratio in a range of 2 to 20, 6 to 20 and not less than 2 but less than 6. Morita et al. teaches a low expansion ratio (see page 7, paragraph 0038, lines 4-6) and a cell wall density in the direction of thickness of the expanded layer and a cell

Art Unit: 1772

wall density in the direction perpendicular to the direction of thickness of the expanded layer (see claims 1 and 2; and also see drawing 2). Therefore, one of ordinary skill in the art would have determined the expansion ratio and the cell wall density ratio through routine experimentation depending on the desired end results as shown by Morita et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the thermoplastic resin expanded layer in Morita et al. to have an expansion ratio in a range of 3 to 40 times and a cell wall density ratio in a range of 2 to 20, 6 to 20, and not less than 2 but less than 6, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art absence of showing unexpected results. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Regarding **claim 5**, note the average cell diameter of the expanded layer is in the range of 1  $\mu\text{m}$  to 100  $\mu\text{m}$  (see page 13, Table 2 and claims 1 and 2). Regarding **claim 6**, note the expanded layer is formed of polypropylene-based resins (see claim 1, lines 1-2). Regarding **claim 9**, note a container being formed from the thermoplastic resin sheet (see page 15, paragraph 0080, line 2).

5. **Claims 7, 8 and 10-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. (JP 10-130412) in view of Usui et al. (6,497,838).

Morita et al. discloses a thermoplastic resin sheet having a thermoplastic resin expanded layer. However, Morita et al. fails to disclose a polyolefin-based resin unexpanded layer formed of polyolefin-based resins having long chain branch and having a branching degree index [A], wherein  $0.20 \leq [A] \leq 0.98$  is satisfied, that is laminated on the expanded layer and has an expansion ratio in a range of 1.0 to 1.5 and 1.0 to 1.1. Usui et al. teaches a polyolefin-based resin unexpanded layer formed of polyolefin-based resins having long chain branch (see col. 2, lines 54-56), having a branching degree index [A], wherein  $0.20 \leq [A] \leq 0.98$  is satisfied (see col. 2, lines 64-67 and col. 3,

lines 15-23), and having an expansion ratio in a range of 1.0 to 1.5 and 1.0 to 1.1 (see col. 13, lines 45-47) for the purpose of laminating on an expanded (foamed) layer in order to produce a container.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided Morita et al. with a polyolefin-based resin unexpanded layer formed of polyolefin-based resins having long chain branch, having a branching degree index  $[A]$ , wherein  $0.20 \leq [A] \leq 0.98$  is satisfied, and having an expansion ratio in a range of 1.0 to 1.5 and 1.0 to 1.1 as suggested by Usui et al. in order to laminate on the expanded (foamed) layer in order to produce a container.

#### *Response to Arguments*

6. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

#### *Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

Application/Control Number: 09/820,757  
Art Unit: 1772

Page 5

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571) 272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAS

Catherine Simone  
Examiner  
Art Unit 1772  
February 24, 2004

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

2/26/04